

PRODUCT DATA SHEET

Methyl 13-methylpentadecanoate

Catalog number: 1613

Common Name: anteiso-Palmitic methyl ester;
anteiso C16 Methyl ester

Source: synthetic

Solubility: chloroform, ethyl ether, ethanol

CAS number: 5487-50-3

Molecular Formula: C₁₇H₃₄O₂

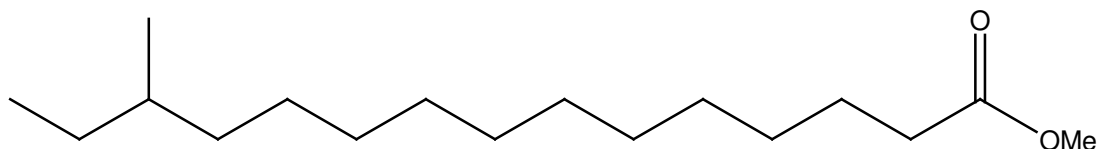
Molecular Weight: 270

Storage: -20°C

Purity: GC > 98%

TLC System: hexane/ethyl ether, (80:20)

Appearance: liquid



Application Notes:

This high purity anteiso-hexadecanoic methyl ester is ideal for use as a standard in the verification of samples¹ and for use in biological studies. Many types of bacteria and marine organisms produce anteiso-fatty acids which can be used to characterize the various organisms.² Some bacteria have iso- but not anteiso-fatty acids while others have anteiso- but not iso-fatty acids. anteiso-Fatty acids are also found in ruminant animals (from the rumen microorganisms) and in ruminant milk mainly from the food chain but also due to some *de novo* synthesis. Branched chain fatty acids have been found in the gut of newborn animals where they have a role in the microorganism gut colonization.³ Some bacteria handle stress (such as heat and toxicity) by changing the ratio of anteiso/iso-fatty acids in the cell membrane. Although anteiso-fatty acids are not usually found in plant oils the waxy surface of leaves can contain significant amounts of these fatty acids.

Selected References:

1. N. Jensen and M. Gross "Fast Atom Bombardment and Tandem Mass Spectrometry for Determining Iso- and Anteiso- Fatty Acids" *Lipids*, Vol. 21(5) pp. 362-365, 1986
2. E. Kim et al. "Fatty Acid Profiles Associated with Microbial Colonization of Freshly Ingested Grass and Rumen Biohydrogenation" *Journal of Dairy Science*, Vol. 88 pp. 3220-3230, 2005
3. R. Ran-Ressler et al. "Branched Chain Fatty Acids Are Constituents of the Normal Healthy Newborn Gastrointestinal Tract" *Pediatric Research*, Vol. 64(6) pp. 605-609, 2008

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